

REMARKS

In the Final Rejection dated October 2, 2006, claims 1-11, 13, 15, 16, 18, 19 and 21-25 were rejected under 35 U.S.C. §102(b) as being anticipated by Antonuk et al. Claims 26 and 27 were rejected under 35 U.S.C. §103(a) as being unpatentable over Antonuk et al. in view of Beyne et al. Claim 28 was rejected under 35 U.S.C. §103(a) as being unpatentable over Antonuk et al. in view of Forrest et al.

Applicants note with appreciation the telephone interview courteously afforded the undersigned representative of the Applicants on January 10, 2006, wherein the rejection of claim 28 was discussed. The Examiner's Supervisor, Renee Luebke, also participated in the telephone interview.

Subject to the submission and review of a formal response to the Final Rejection, it was agreed at the interview that claim 28 appeared to be distinguishable over the prior art of record. Consistent with this agreement reached at the interview, the previously-indicated allowable subject matter of claim 14 has been embodied in independent claim 1, and claim 14 accordingly has been cancelled. An editorial amendment has been made in claim 28 to correct a typographical error therein. Dependent claims that previously depended directly or indirectly from claim 1 have now been revised so as to depend from claim 28, where appropriate. Dependent claims for which dependency from claim 28 would not be correct, or would be redundant, have been cancelled. Independent claim 25 and the claims depending therefrom have been cancelled as well.

As discussed in the telephone interview, in the Final Rejection the Examiner acknowledged that the Antonuk et al. reference does not expressly disclose the use of an organic semiconductor in the ionizing radiation measurement device disclosed

in that reference. The Examiner relied on the Forrest et al. reference as disclosing an organic photosensitive device making use of layers formed by organic semiconductor material. The Examiner stated it would have been obvious to a person of ordinary skill in the relevant technology to modify the device disclosed in the Antonuk et al. reference to have at least one organic semiconductor as taught by Forrest et al.

Claim 28 claims a device for measuring an ionizing radiation dosage having an ionizing radiation absorption structure that is comprised of a plurality of thin-film layers disposed one above another. These layers include a layer embodying scintillator material and a layer that forms at least one completely organic thin-film diode structure. Claim 28 explicitly claims the completely organic thin film diode structure as being comprised of two film electrodes, each *consisting of* a conductive polymer. A photo-active semiconductor film layer consisting of at least one organic semiconductor is disposed between these two film electrodes.

Therefore, not only are the film electrodes in claim 28 stated to be components in a completely organic thin film diode structure, but also the electrodes are explicitly stated to consist of a conductive polymer.

The Forrest et al. reference discloses an overall device structure 300 that includes a number of layers, such as layer 303 that can be a single organic photoconductor, or some other type of organic material. By contrast, however, each of the *electrodes* in the various embodiments described in the Forrest et al. reference is explicitly stated to be formed by metal, namely ITO (indium tin oxide). This is explicitly stated for the first diode 302 at column 17, lines 61-62, and for the

electrode 402 at column 18, lines 32-33, and for the electrode 405 at column 18, lines 39-40.

Therefore, the Forrest et al. reference explicitly teaches away from a completely organic diode structure, and explicitly teaches that, whatever material might be used for other layers in the structure disclosed in the Forrest et al. reference, the electrodes consist of metal.

Therefore, if the Antonuk et al. device were modified in accordance with the teachings of Forrest et al., the modified device would not conform to the language of claim 28, because such a device modified in accordance with the teachings of Forrest et al. would include metallic (i.e., ITO) electrodes, contrary to the explicit language of claim 28.

Moreover, as noted in Applicants' previous response, the Forrest et al. reference is not directed to an ionizing radiation detector, but is instead directed to a solar cell, which is a type of device that ideally should be designed with a high degree of radiation absorption. The same is true of the imaging device disclosed in the Antonuk et al. reference. A radiation detecting device of the type disclosed and claimed in the present application, since it must be placed in the path of a radiation beam that is used for other purposes (such as imaging) should absorb as low radiation as possible in order to detract as little as possible from the radiation beam itself. Nevertheless, a certain small amount of radiation absorption is necessary in order to provide the radiation detection function. Neither the Antonuk et al. reference nor the Forrest et al. reference discloses or suggests how to construct a minimally absorbing radiation detection device of any type, much less such a device wherein

the solution to the aforementioned problem is to employ a completely organic diode structure.

Claim 28 and the claims depending therefrom, therefore, would not have been obvious to a person of ordinary skill in the field of designing ionizing radiation dosage measurement devices, based on the teachings of Antonuk et al. and Forrest et al., under the provisions of 35 U.S.C. §103(a).

The editorial change that has been made in claim 28 does not raise any new issues requiring further searching or consideration, and merely corrects a typographical error to make the language in line 6 of claim 28 consistent with the previously-present language at line 9 of claim 28. The changing of the dependency of certain of the dependent claims also does not raise any new issue requiring further searching or consideration. The present Amendment is therefore properly enterable under the provisions of 37 C.F.R. § 1.116, and entry of the present Amendment is therefore respectfully requested, as are reconsideration and allowance of the application.

Submitted by,

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